

University of Mumbai
Online Examination 2020

Program: TE Chemical Engineering

Curriculum Scheme: Revised 2016(Choice Based)

Examination: Third Year Semester V

Course Code: CHDE5013

Course Name: Advanced Material Science (Elective)

Time: 1 hour

Max. Marks: 50

Note to the students:- All Questions are compulsory and carry equal marks .

Q1.	The word polymer meant for material made from
Option A:	Single entities
Option B:	Two entities
Option C:	Multiple entities
Option D:	Any entity
Q2.	The property of ceramic that enables its use as abrasive powder and cutting tools is
Option A:	High toughness
Option B:	High strength
Option C:	High melting point
Option D:	High electric resistivity
Q3.	The properties of ceramic that make them excellent refractory material are
Option A:	High toughness and strength
Option B:	High melting point and electric resistivity
Option C:	High melting point and good thermal insulator
Option D:	High melting point and chemical inertness
Q4.	Manufacturing of components having continuous lengths and the constant cross-sectional shape is done by _____ process.
Option A:	Roving
Option B:	Pultrusion
Option C:	Curing
Option D:	Pulling

Q5.	For which of the following physical deposition technique is not suitable?
Option A:	Deep trenches
Option B:	Flat surfaces
Option C:	Wafer of very reactive material
Option D:	Rough surfaces
Q6.	Which of the following types of stainless steels contain maximum amount of chromium in it?
Option A:	Duplex stainless steels
Option B:	Martensitic stainless steels
Option C:	Austenitic stainless steels
Option D:	Precipitation hardenable stainless steels
Q7.	Which is the primary element used for making stainless steel alloy?
Option A:	Chromium
Option B:	Zirconium
Option C:	Vanadium
Option D:	Indium
Q8.	Which of the following are applications of Ferritic stainless steels?
Option A:	Aircraft engine parts, heat exchangers
Option B:	Milk, kettles
Option C:	Oil burner parts, furnace elements
Option D:	Pumps and valve parts
Q9.	Liquid or gas polymers having short chains and low molecular weights are known as -----
Option A:	High Polymer
Option B:	Homo Polymer
Option C:	Copolymer
Option D:	Oligo polymer
Q10.	Good debonding ability is achieved if the interphase material has ----- shear strength
Option A:	Low
Option B:	High
Option C:	Moderate
Option D:	Very high
Q11.	Addition of different types of monomers to form polymer chain is known as -----
Option A:	Chain reaction polymerization
Option B:	Copolymerization
Option C:	Combination
Option D:	Disproportionation
Q12.	What is the generic name of class of polymer, which is commercially known as “nylon”?
Option A:	Polyacetals
Option B:	Polyamide

Option C:	Cellulose
Option D:	Polyester
Q13.	Which one of the following is not a process for fabrication of structural parts and monolithic slabs from silicon carbide
Option A:	Pressureless sintering
Option B:	Cold pressing
Option C:	Hot pressing
Option D:	Reaction bonding
Q14.	Necking occurs in which of the following fractures?
Option A:	Ductile fractures
Option B:	Brittle fracture
Option C:	Fatigue
Option D:	It doesn't occur during fracture
Q15.	Zirconia is a compound that belongs to
Option A:	Ceramic composite
Option B:	Metal composite
Option C:	Ceramic
Option D:	Polymer
Q16.	Which of the following types of stainless steels contain maximum amount of chromium in it?
Option A:	Duplex stainless steels
Option B:	Martensitic stainless steels
Option C:	Austenitic stainless steels
Option D:	Precipitation hardenable stainless steels
Q17.	These polymers can not be recycled
Option A:	Thermoplast
Option B:	Thermoset
Option C:	Elastomers
Option D:	All polymers
Q18.	Which polymer additives are added to improve flexibility
Option A:	Lubricants
Option B:	Plasticizers
Option C:	Stabilizers
Option D:	Reinforcement
Q19.	Which of the following materials is required in a technique of decarburizing the molten steel?
Option A:	Calcium carbonate
Option B:	Sodium chloride

Option C:	Carbonferrochrome
Option D:	Sodium ferrochrome
Q20.	Carbon fibre is an example of -----
Option A:	Filler
Option B:	Stabilizer
Option C:	Reinforcement
Option D:	Flame retardant
Q21.	Which of the following is not a stage of polymerization
Option A:	Initiation
Option B:	Propagation
Option C:	Termination
Option D:	Recrystallization
Q22.	Which of the following is not the disadvantage of slurry infiltration
Option A:	High pressure applied
Option B:	Require expensive equipments
Option C:	Small and simple parts may be fabricated
Option D:	Low porosity
Q23.	Which one of the following ceramics can be used as a pigment in paints
Option A:	Silicon carbide
Option B:	Silicon oxide
Option C:	Aluminium oxide
Option D:	Titanium oxide
Q24.	Where does the granular molding material get loaded into?
Option A:	Barrel
Option B:	Hopper
Option C:	Pellets
Option D:	Split
Q25.	In application of CNTs for hydrogen storage
Option A:	the amount of hydrogen stored is very low
Option B:	though storage is possible, release is very difficult
Option C:	The storage occurs both in between and inside the nanotube bundles
Option D:	The storage occurs inside the nanotube bundles only

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	A
Q3.	C
Q4	B
Q5	A
Q6	A
Q7	A
Q8.	C
Q9.	D
Q10.	A
Q11.	B
Q12.	B
Q13.	A
Q14.	A
Q15.	C
Q16.	B
Q17.	B
Q18.	B
Q19.	C
Q20.	C
Q21.	D
Q22.	D
Q23.	D
Q24.	B
Q25.	C